A Generalization on the Rules Governing the Towlor SOV/156-59-1-54,54

Pluids Through Granular Layers

ASSUCIATION:

Kafedra gidravliki Kasanskogo khimiko-tekhnologieleskogo instituta im. S. M. Kireva (Chair of Hydraulics of the Kazan'

Institute of Chemical Technology ineni S. M. Kir.v)

SUBMITTED:

October 10, 1958

Card 3/3

USCCMM-DC-60,911

Some Generalizations in the Hydraulics of a Grain Layer

n is characteristic of the different conditions. It may be seen from the diagram that three different conditions occur: laminar, transition, and turbulence. This method of representation makes it possible to find the equations for each granular material by 2-3 experiments. It could be shown that filtration and passing thru of a liquid in a floating layer are subject to the same rules. There are 1 figure and

ASSOCIATION:

Kazanskiy khimiko-tekhnologicheskiy institut imeni S. M. Kirova, Kafedra gidravliki (Kazan' Institute of Chemical Technology imeni S. M. Kirov, Chair of Hydraulics) June 16, 1958

SUBMITTED:

Card 2/2

STEPOCHKIN, B. F. (Kazan')

"Extention of the Laws of Hydrodynamics to Granular Porous to Granular Porous Media."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

STEPOCHKIN, B.F.

Free sedimentation of particles of irregular shapes. Izv.vys.ucheb. zav.; khim.i tekh. 3 no.1:204-207 '60. (MIEA 13:6)

1. Kafedra gidravliki Kazanskogo khimiko-tekhnologicheskogo instituta imeni S.M. Kirova. (Precipitation (Chemistry))

STEPOCHKIN, B.F., inzh.

AND THE PROPERTY OF THE STREET OF THE STREET STREET, S

Determining the velocity of flying particles of arbitrary form. Teploenergetika 7 no.5:53-55 My '60. (MIRA 13:8)

1. Kazanskiy khimiko-tekhnologicheskiy institut.
(Particles) (Aerodynamics)

ZAYNULLIN, Z.F; STEPOCHKIN, B.F., otv. red.

[Compressing machinery (summaries of lectures); manual for correspondence students specializing in mechanical engineering] Kompressornye mashiny (konspekt lektsii); uchebnoe posobie dlia studentov mekhanicheskikh spetsial'nostei zaochnogo fakul'teta. Kazan', Kazanskii khimiko-tekhnologicheskii in-t im. S.M.Kirova, 1964. 155 p. (MIRA 18:3)

The personal exemplatiness of communities is a guarantee of successful flight work. Nor. abor. AS to.745-19 J: 165.

(MIRA 18:8)

STEPOCHKIN, N., starshina sverkhsrochnoy sluzhby, master bozhdeniya tanka

In the slushy season. Starsh.-serzh. no.4(7):29 Ap *61.

(MIRA 14:7)

(Tanks (Military science)—Cold weather operation)

STEPOCHKINA, H.D., meditsinskaya sestra (Moskva)

How to make a blood transfusion. Med. sestra no.1:19-21 Ja '56 (NIRA 9:3)

(BLOOD--TRANSFUSION)

的特殊基础,这种可以特别的特别,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人, 第一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就

BEKAURI, N.V.: KOROLAV, V.I.: STAPOUHKINA, N.A.: RUSAKOVA, K.G.

Effect of pilocarpine and atropin on the size of the pupil and intraocular pressure in rabbits in normal conditions and in disorders of the innervation of the eye. Fiziol. zhur. 47 no.7:821-825 Jl '61. (MIM 15:1)

1. From the Laboratory of Trophic Innervation, I.P.Pavlov Institute of Physiology, Leningrad.

(ALKALOIDS__PHYSIOLOGICAL EFFECT)

(PUPIL (EYE)) (INTRAOCULAR PRESSURE) (EYE_INRERVATION)

VASILIYEVA, V.V.; STEPCCHKINA, R.A. hemodynamic indices in the period of restoration following runcular activity. Fiziol. Thur. 51 no.11:1308-1314 N '65.

这种,但是<mark>是我们因此的</mark>是是我们的<mark>是我们的是我们的</mark>是我们的是我们的是我们的的是我们就是我们的的。我们就是这个人的。

(MIRA 18:11)

1. Karedra fiziologii Instituta fizioheskoy kulitury imeni P.F. Lesgafta, Leningrad.

STEFO: AITIUMS, Liudmila, kand. med. nauk; PAFECKIENE, S., red.;

PAKERYTE, O., tekhn.red.

[Let us eliminate diphtheria] Likviduokime difterija. Vilnius, Valstybine politines ir mokslines literaturos leidykla, 1961.

15 p. (DIPHTHERIA)

(DIPHTHERIA)

STEFCHARTIEME, Liudmila; nAUSINS, Fetrus; FARMEZIEME, A., red.

[The child grows] Vaikas auga. Vilnius, Leidykla
"Mintis." 1965. 253 p. [In Lithuanian] (MikA 18:6)

The same when the commence of the same states and the same states are the same states and the same states are the same states

CIBIAAS, F., kand. med. nauk; DAKTALAVICIELE, E., kand. med. nauk; JARZEMSKAS, J., kand. med. nauk [deceased]; JOCEVICIENE, A., kand. med.nauk; KRIKSTOFAITIS, M., kand. med. nauk; NENISKIS, J., kand. med. nauk; STEPONAITIENE, L., kand. med. nauk; SURKIS, J., kand. med. nauk; SIIMANAS, S., kand. biolog. nauk; CEPULIS, St., prof.; KUPCINSKAS, J., prof.; LASAS, Vl., prof.; SIDERAVICIUS, Br., prof.; KANOPKA, E., dots.; EVIKIMS, V., dots.; LABAMAUSKAS, K., dots.; FOLUKG. DAS, H., dots.; BABUBLMS, P., doktor; CAPKEVICIUS, V., doktor; MAKARIUNAS, P., doktor; PAKONAITIS, P., doktor; STUCKA.R., doktor; SURGAILIS, H., doktor; PAULIUKONIETE, J., red.; ANAITIS, J., tekhn. red.

[Health and diseases] Antrasis pataisytas leidimas. Vilnius, Valstybine politines ir mokslines literaturos leidykla, 1961. 356 p. (MIRA 15:3)

(HYGIFHE) (PATHOLOGY)

STEPOTAITIEME, L., med.m.kand.; RYBALKO, V.

Staphylococcal pneumonias in children. Sveik. apsaug. 8 no.8: 30-33 Ag*63.

1. Vilniaus Valst. V.Kapsuko v. universiteto Medicinos fu-kultetas.

STEPONAVICHYUTE, A. V. [Steponaviciute, A.]; VIZBARAYTE, Ya. I. [Vizbaraite, J.]; YUTSIS, A. P. [Jucys, A.], akademik

Transformation matrix of a three-electron wave function between LS and J1 couplings. Liet ak darbai no.3:41-52 '61.

1. Institut fiziki i matematiki Akademii nauk Litovskoy SSR i Vil'nyusskiy gosudarstvennyy universitet im. V. Kapsukasa.

STFPONAVICIENE, V.

Vitamin C content in food of some restaurants in Kaunas. Statk, apsaug. 6:31-34 S '64.

经产品经济的证据的经济在特别的基础的基础的基础的基础的经验,是是多少的的规则还是必要的。 第一个

1. Kauno Valst. medicinos instituto higienos katedra. (Katedros vedejas - prof. J. Sopauskas).

of tiagnosis, clinic, and treatment of tubers dar meningities in early age (up to three years)." Vil'nyis, 1988,

17 or (Vin of Bigner Education USCR. Vil'nyis
batte friv in V. Kansukas) 10. do ies (VL, 27-57, 137)

-129 -

TILIS, A. Yu.; VENGERSKAYA, Kh. Ya.; STEPOVAYA, N. Ye. (Tashkent)

Diagnostic significance of the value of the coefficient of insufficient oxidation during the action of heavy metals. Gig. truda i prof. zab. no.3:30-34 62. (MIRA 15:4)

1. Uzbekskiy nauchno-issledovatel'skiy institut sanitarii, gigiyeny i profzabolevaniy.

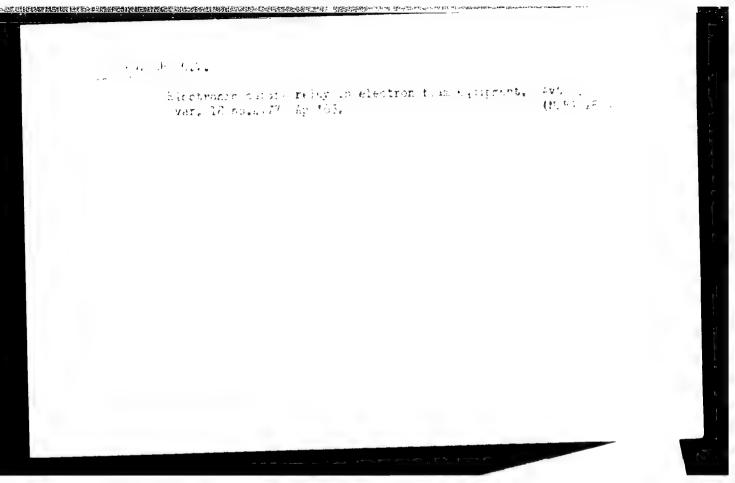
(METALS_TOXICOLOGY)
(OXIDATION, PHYSIOLOGICAL)

STEPONAVICIENE, V.

Vitamin C content in preserved vegetables. Sveik. Apsaug. no.4:33-36 '64.

并被死亡的政策的**对对政策的**是国际政策的政策,但是这种政策的对象,但是对对政策的对象,但是是对政策的对象,但是是对政策的对象,但是是对政策的对象,但是是对政策的

1. Kauno Valst. medicinos instituto higienos katedra (Katedros vedejas - prof. J. Sopauskas).



```
5/020/63/148/001/026/032
                                                                                                                                                                                        B101/B186
                                                                      Stepovik, L. P., Shilova, A. K., Shilov, A. Ye.
                                                                        Kinetics and mechanism of the initiation of ethylene
                                                                         Kinetics and mechanism of the initiation of ethylene catalyst polymerization on a soluble Ziegler-type complex catalyst
                                                                            Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 122-125
                            TEXT: In a previous paper (Vysokomolek. soyed., 4, no.11 (1962)) the following reaction pattern was found for the polymerization of olefins on a (n-CeHe) TiClo + Al(CHz) Cl catalyst:
                     AUTUORS:
                       TITLE:
                                   (C_{5}^{H}_{5})_{2}^{TiCl_{2}} \xrightarrow{\text{TiCH}_{2}} A_{1}(C_{1}^{H}_{3})_{2}^{C_{1}} \xrightarrow{\text{CH}_{2}} (C_{2}^{H}_{2})_{2}^{Ti(G_{1}^{H}_{3})} C_{1}^{TiCH_{1}^{+}} + RC_{1}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H}_{2}^{H
                                 on a (R-C5H5) TiGl2 + Al(CH3)2Cl catalyst:
                           PERIODICAL:
                                     A = (C5H5)2TiCH3 + Al(CH3)Cl3; (C5H5)2TiCH3 + RCH=CH2
                                       -> (C5H5)2TiCH2CH(R)CH3; (C5H5)2TiCH2CH(R)CH3 + AlCH3Cl3.
                                           (C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>TiGH<sub>2</sub>CH(R)CH<sub>3</sub>Cl·Al(CH<sub>3</sub>)Cl<sub>2</sub>  (C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>TiCl·AlCH<sub>3</sub>Cl<sub>2</sub> (complex C).
                                         -> (C5H5)2TiCH2CH(R)CH3Cl.Al(CH3)Cl2 (complex B);
     is
   men
  for
  Which
 expla:
                                                                                                                                                                 ethylene polymerization is
                                                 Card 1/3
                                                                                                                                        the linear C3H7 radical is formed
from C.
                                                                                                         e group -CH<sub>2</sub>-CH(CH<sub>3</sub>)R is formed from the CIA-RDP86-00513R001653220020-0
Card 2/
                    APPROVED FOR RELEASE: 08/26/2000
```

S/020/63/148/001/026/032 B101/B186

Kinetics and mechanism of the ...

 $\alpha\text{-olefins}$ of the formula RCH=CH $_2$; this group is easily converted to the isoolefin $\text{CH}_2\text{-c}(\text{CH}_3)R$, with the titanium being reduced and termination occurring. This generally holds for Ziegler catalysts by which ethylene, but no other $\alpha\text{-olefins},$ can be polymerized. An active B complex is formed only with $C_2\text{H}_4$. The ratio k_2/k_1 between the constant k_2 for chain propagation and k_1 for initiation was found to be 18.9, in good agreement with the value, 19, found from the ratio between maximum rate of polymerization at constant $p_{C_2\text{H}_4}$ and the initial rate of complex formation.

These results do not confirm the assumptions made by J.S.W. Chien (J.Am. Chem. Soc., 81, 86 (1959)) and G.L.Karapinka, W.L.Carrick (J.Polym.Sci., 55, 145 (1961)). There are 3 figures and 1 table.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute

of Chemical Physics of the Academy of Sciences USSR)

PRESENTED: July 23, 1962, by N.N. Semenov, Academician

SUBMITTED: July 23, 1962

Card 3/3

RAZUVAYEV, G.A.; STEPOVIK, L.P.; MITROFANOVA, Ye.V.

Reactions of aluminum triisopropylate with acyl peroxides. Izv.AN SSSR. Ser.khim. no.1:162-164 Ja '64. (MIRA 17:4)

1. Nauchno-issledovatel'skiy institut pri Gor'kovskom gosudarstvennom universitete im. N.I.Lobachevskogo.

RAZMVAYEV. GURA, SITEPOVIK, JUPA, MITROFANOVA, Yeav.

Reset one of aluminum triisopropylate with peroxides and anhydrides. Zhur. ob. khim. 35 nc.6:1095-1098 Je '65.
(MIRA 18:6

1. Nauchno-issiedovatal'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete imeni Lobachevskogo.

meastions of organoaluminum compounds with early structure and achydrides. Zhur. ob. khim. 35 no.9:1672-1676 S '65.

[NET 12.10]

[Neuchno.iseledovatel'skiy institut khimii pri forthowsker gradurstvenoom universitate imed N.I. labachevskoop.

RAZUVAYEV, G.A.; STEPOVIK, L.P.; PKRVEYEV, F. Ya.; DEMIDOVA, V.M.; ALANIYA, V.P.; SOKOLOV, N.A.; KHARCHENKO, V.G.; KRUPINA, T.I.; KLIMENKO, S.K.; RASSUDOVA, A.A.; GORELIK, M.V.

Letters to the editors. Zhur. org. khim. 1 no. 12:2244-2246 D '65 (MIRA 19:1)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete (for Razuvayev, Stepovik). 2. Lenningradskiy gosudarstvennyy universitet (for Perveyev, Denidova). 3. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni Gubkina (for Alaniya, Sokolov). 4. Sarstovskiy politekhnicheskiy institut (for Kharchenko, Krupina, Klimenko, Rassudova).

PEYVE, Ya.V. [Peive, J.]; ANSPOK, P.I. [Anspoks, P.]; PAKALN, G.Zh. [Pakalns, G.]; KONONENKO-Stepovaya, T.A.; STEPOVOY, A.I.

Mapping trace element contents of soils on a collective farm and estimating the effectiveness of the use of fertilizers. Pochvovedenie no.7:1-9 J1 64. (MIRA 17:8)

1. Institut biologii AN Latviyskoy Sa.

到30日第七世<mark>的日本共和国的共和国的共和国的共和国的共和国的共和国的共和国的</mark>的对象的对对对国际的企业。2010日中国的一个主义

USSR/Cultivated Plants - Grains.

THE STREET WHILE THE STREET STREET, SHE STREET, SHE STREET, SHE STREET, SHE STREET, SHE STREET, SHE STREET, SHE

M-2

: Ref Zhur - Biol., No 7, 1958, 29756 Abs Jour

Author

: Koz'mina, Ye.P., Stepovskaya, G.N.

Inst

Title

: The Shatilovskaya 4, a New Buckwheat Variety.

Orig Pub

: Inform. byul. Gos. komis. po sortoispyt. s. -kh. kul-tur

pri m-ve s. kh. SSSR, 1957, No 2, 26-29

Abstract

Shatilovskaya 4 variety buckwheat, cultivated by the orlovskaya Oblast' Experimental Agricultural Station (formerly the Shatilovskaya) from the Bogatyr' variety by means of seed selection, has been districted for rayons of the chernozem soil zone in 1956. It is close to the Bogatyr' variety in biological and morphological characteristics, although it surpasses the latter and a number of other selected varieties in its grain yield and quality in a number of rayons. The indices for the mean harvests and groat yield for 1 hectare of shatilovskaya 4

Card 1/2

For MINA, Ye.P., doktor tekhn.nauk; STEPOVSKAYA, G.N., agronom

Pay more attention to the cultivation of buckwheat. Zemledelie 7 no.3:63-67 Mr '59. (NIRA 12:4)

(Buckwheat)

Journey across our homeland ("Touring the reserves of the Ukraine." Reviewed by V. Stepovyi). Znan. ta pratsia no.7:

(MIRA 14:8)

22 J1 '61.

(Ukraine--National parks and reserves)

STEPONICI, B

"Advanced agricultural technique is required in the cultivation of buckwheat." (p.105)

NOWT ROIMICTYC (Panstwowe Wydawnictwo Rolricze in Lesne) Warzawa, Vol. 3, no. 4,

Apr. 1974

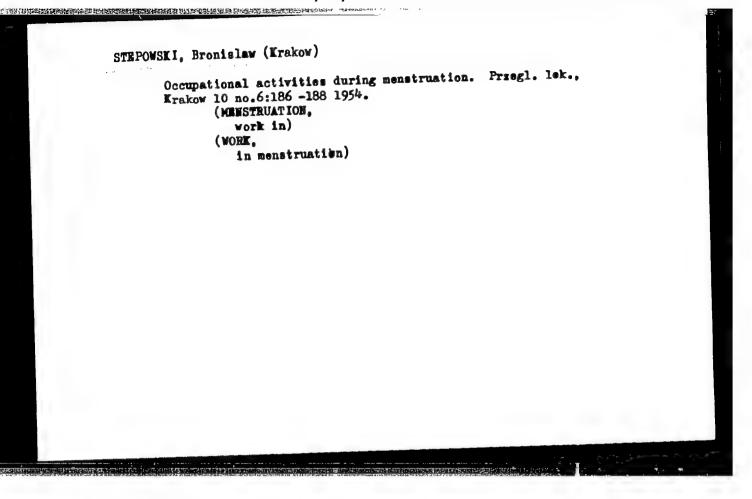
SO: FIST European Accessions List, Vol 3, no. 8, August 1954

STEPOWSKI, Bronislaw

The pituitary gland and pregnancy. Ginek. pol. 34 no.1:14-26 163.

1. Z II Kliniki Poloznictwa i Chorob Kobiecych Sl. A.M. w Bytomiu.

(PITUITARY GLAND)



STEPOWSKI, Bronislaw (Krakow, Batorego 7)

Latent syphilis in pregnancy. Gin. polska 25 no.1:75-78 Ja-Mr 154.

(PREGNANCY, in various diseases,

*syphilis, latent)

(SYPHILIS, in pregnancy,

*latent)

STEPOWSKI, Bronislaw (Krakow, Batorego 7)

Gestational polyneuritis. Gin. polska 26 no.1:73-79 Jan-Mar 55.

(FREGNANCY, complications, polyneuritis)

(POLYNEURITIS, in pregnancy.)

"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0

STEPOWSKI, Bronislaw

宋·陈元明《经验》中,1915年,

The theory of Alexander Rosner concerning the constitution of female nex organs in the light of recent concepts. Gin. polska 29 no.5: 589-594 Sept-Oct 58.

1. Z II Kliniki Poloznictwa i Chorob Kobiecych Slaskiej A. M. w Bytomiu Kierownik Kliniki: prof. dr med. B. Stepowski. II Klinika Polocnictwa i Chorob Kobiecych A. M. Bytom, ul. Batorego 15.

(GENITALIA, FEMALE, anat. & histol.

constitution characteristics, comparison of Rosner's theory with current theories (Pol))

"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0

SHMAKIN, B.M.; STEPPAN, M.O.

大学な、年本語の大学は大学は大学に対して、「大学ななない」という。

Two sphenes from Archean pegmatites in the Aldan Shield.

Izv.vys.ucheb.zav.;geol.i razv. 4 no.10:59-65 0 :61. (MIFA 14:12)

1. Moskovskiy geologorazvedochnyy institut imeni S.Ordzhonikidze. (Aldan Flateau--Titanite)

1	Chemical Sechnology. Chemical Products and Latin Applications. Synthetic Polyners.* 1 ACL Lis, 19-28 - 1999, 30. 61015
•	: Secol A. I. : An omblide sets Hale of distins
	Tacks. Follows: 1988, 2. No 1941, Diel. Tafere. 178. 7. ke f. 1 Described is the application of lastics in whose of metals and other materials in the mount course of automobile earts: bearines, to mers, hindles, coverings, parts of bruke cylinder and signing shalt, setts, etc. It has been established, for instance, that spring stormers hade of place-bestolite atom well efter 15-th thousing bilaneters till bronze was now excelded that specifies 12 thousand belowers 1. Seday
7.140:	# 73 m G f E rist +

STEPRANE, I.

Economic situation of Vidzeme peasant-farmers in the 30's and 40's of the 19th century. Vestis Latv ak no.6:29-36 '60. (EEAI 10:9)

(Latvia-Peasantry

STEPUK, Ya.V.

6(4)

PHASE I BOOK EXPLOITATION

SOV/2882

Kalashnikov, Anatoliy Mikhaylovich, and Yakov Vasil'yevich Stepuk

Osnovy radiotekhniki i radiolokatsii, Kniga 1: Kolebatel'nyye sistemy (Principles of Radio Engineering and Radar, Book 1: Oscillation Systems) Moscow, Voyenizdat, 1959. 354 p. No. of copies printed not given.

Ed.: S. N. Tikhonov, Engineer, Colonel; Tech. Ed.: G. F. Sokolova.

PURPOSE: This book is intended for students of military radio schools. It may be of interest to military officers engaged in the operation of radio equipment and also students of civilian schools studying radio and radar.

COVERAGE: The authors discuss resonant circuits transmission lines, waveguides, cavity resonators and antennas. Attention is given to physical aspects of processes taking place in these devices. Formulas and expressions in the book involve techniques of secondary-school mathematics. Introduction was written by Major V. G. Levichev; Chapter 1 by Major A. M. Kalashnikov;

Card-1/12

SLUTSKIY, Veniamin Zakharovich; FOGEL'SON, Boris Il'ich; LEVICHEV, Vladimir Grigor'yevich; YAGODIN, Oleg Gavrilovich; Prinimali uchastiye MUNVEZ-FRENKEL, I.Z.; STEPUK, Ya.V.; MATLIN, I.I., red.; SOLOMONIK, R.L., tekhn. red.

TO PUBLICATE THE PROPERTY OF T

[Fundamentals of radar and radio engineering; display units, rectifiers, and transistor devices] Osnovy radiotekhniki i radio-lokatsii; indikatory, vypriamiteli i poluprovodnikovye pribory. By V.Z.Slutskii i dr. Moskva, Voen.izd-vo M-va oborony SSSR, 1961. 355 p. (MIRA 14:12) (Radar) (Radio-Equipment and supplies)

(Radar) (Radio—Equipment and Supplies)

KALASHNIKOV, Anatoliy Mikhaylovich; STEPUK, Yakov Vanil'yovich; GAYEVICH, V.N., red.; TIKHONOV, S.N., inzh.-polkovnik, red.; KOKINA, N.N., tekhn. red.

的现在分词,我们就是<mark>是一个,我们就是不够的,我们就是不是一个,我们就是</mark>是一个,我们就是这个,我们就是这个,我们就是这个,我们就是这个,我们就是我们的,我们就是这

[Fundamentals of radio engineering and radar; oscillatory systems]Osnovy radiotekhniki i radiolokatski; kolebatel-nye sistemy. Izd.2., perer. Moskva, Voenizdat, 1962.
365 p. (MIRA 15:11)
(Radio) (Radar)

STEPHANAN

PHASE I BOOK EXPLOITATION

SOV/6294

Levichev, Vladimir Grigor'yevich, Yakov Vasil'yevich Stepuk and Boris Il'ich Fogel'son.

Osnovy radiotekhniki i radiolokatsii; radioperedayushchiye i radiopriyemnyye ustroystva (Fundamentals of Radio Engineering and Radar; Radio Transmitting and Receiving Devices). Moscow, Voyenizdat M-va obor. SSSR, 1962. 494 p. 60,000 copies printed.

Ed.: I. I. Matlin; Tech, Ed.: R. L. Solomonik.

PURPOSE: This book is intended for students in schools of Radio Engineering who are taking courses in Radio Engineering and Radar. It should also be useful to military personnel concerned with the operation of radio engineering equipment, as well as to those students in civil schools studying these subjects.

COVERAGE: The book describes radio transmitting and radio receiving systems with emphasis on the physical aspect of the phenomena

Card 1/151_

"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0

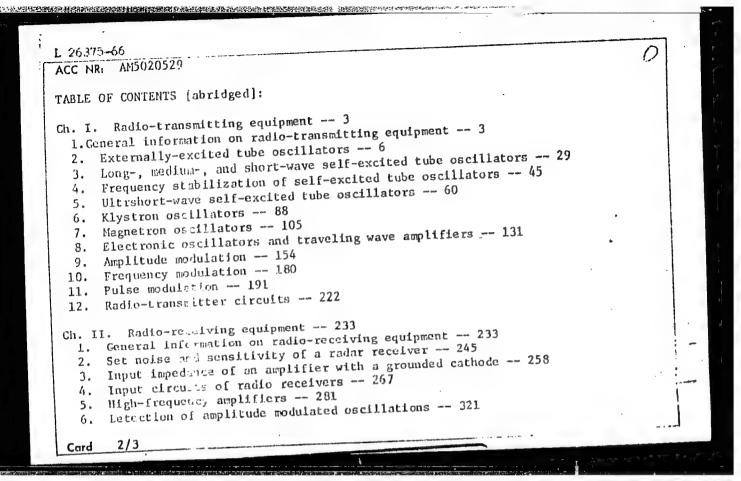
EWT(1)/FSS-2 UR/ 45 L 26409-66 Monograph ACC NR: AM502052'/ B+1 Kalashnikov, Anatoliy Mikhaylovich; Stepuk, YAkov Vasil'yevich Principles of radio engineering and radar; oscillating systems (Osnovy radiotekhniki i radiolokatsii; kolebatel'nyye sistemy) 3rd ed., rev. Moscow, Voyenizdat M-va obor. SSSR, 1965. 382 p. illus. 47000 copies printed. TOPIC TAGS: oscillator theory, radio engineering, radar engineering, electromagnetic wave PURPOSE AND COVERAGE: This textbook is intended for students in radio engineering schools specializing in radio and radar. It may also be of interest to military officers engaged in the operation and maintenance of radio and electronic equipment, as well as to students in civilian radio and radar schools. This textbook is one of four volumes on the subject "Principles of Radio Engineering and Radar" Oscillatory systems, electromagnetic power transmission lines, waveguides, cavity resonators, and antennas are covered in this volume. Considerable attention is paid to the physical side of the occurring phenomena. High school-level mathematics is used in this text. TABLE OF CONTENTS [abridged] Introduction - 3 Ch. I. Oscillatory circuits - 14 Card 1/2

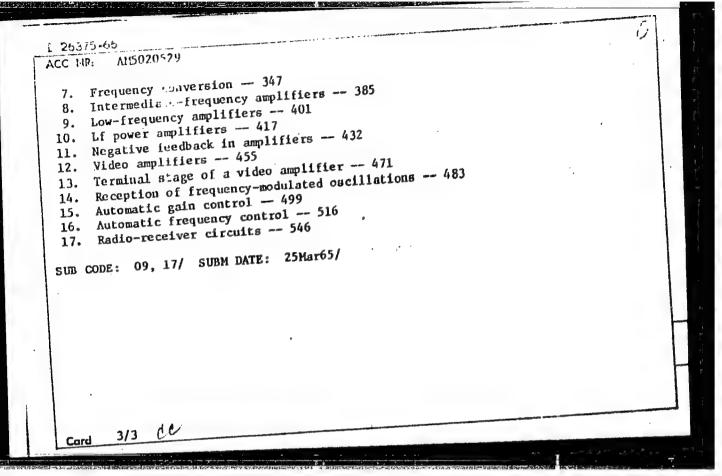
"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0

L 26409-66 ACC NR: AM5020527						
Ch. II. Electromagnetic power	transmission lines .	— 124				
Ch. III. Waveguides and cavity resonators — 208						
Ch. IV. Antennas — 259						
SUB CODE: 09, 17/ SUBM DATE:	26Feb65/ 08°C	***				
	•			•		
			,			
•		•				
	•	,		·		
	•				-	
		.•	•	-: :		
Card 2/2 C.C.						

1 26375-66 EWY(d)/FSS-2 ACC NR: AN5020529 Honograph	UR/ 26
Lawichev. V. G.: Stepuk, Ya. V.; Fogel'son, B. I.	B+1 .
Fundamentals of radio engineering and radar; radio tran receivers (Osnovy radiotekhniki i radiolokatsii; rashchiye i radiopriyemnyye ustroystva) 2d ed., rev. Voyenizdat M-va obor. SSSR, 1965. 583 p. illus. 4	Moscow ₄
TOPIC TAGS: radio transmitter, radio receiver, radio theory, radio receiver theory	1.3
PURPOSE AND COVERAGE: This textbook is intended for stendineering schools specializing in radio communications and radio of interest to military officers engaged in the operation and radio-communication, radar, and electronic equipment as well as civilian radar and radio schools. This textbook is one of four subject "Principles of radio engineering and radar". Radio training equipment are covered in this volume. Considerable attention equipment are covered in this volume. Considerable attention physical side of phenomena occurring in the processes of transmich physical side of phenomena occurring in the processes of transmich ch. I., section 1, 2, 3, and 12 and Ch. II were written by V. G. Stepuk; sections 4, 9, 10 and 1 and Ch. I section 5 by A. M. Kalashnikov. There are no reference	to students in volumes on the asmitting and receiv- on is paid to the ission and reception. Levichev; Ch. I 1 by B. J. Fogel son;
Card 1/3	





STE CHAIN, J. V.

Georgia Sudy or Teaching

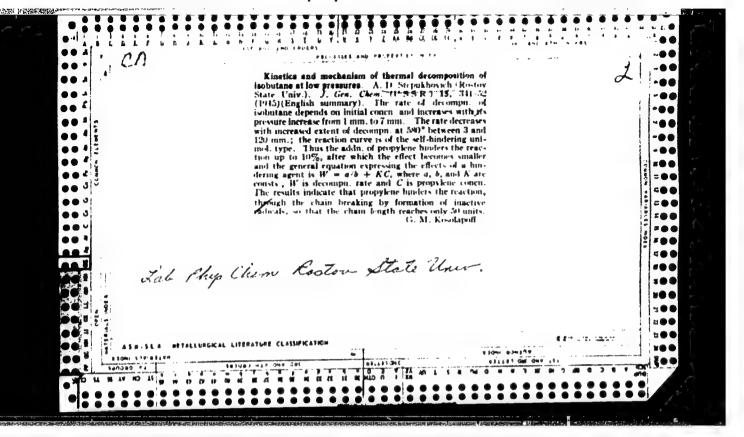
Speech by the old teacher of geography. Vop. geog. 27, 1951

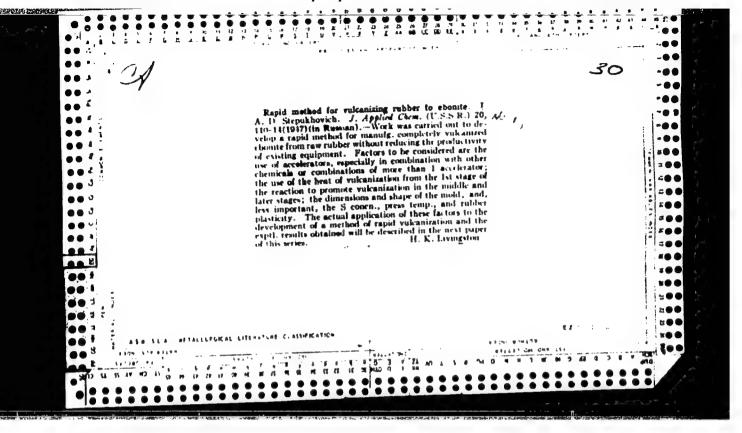
9. Monthly List of Russian Accessions, Library of Congress, Arpil 1953/2 Uncl.

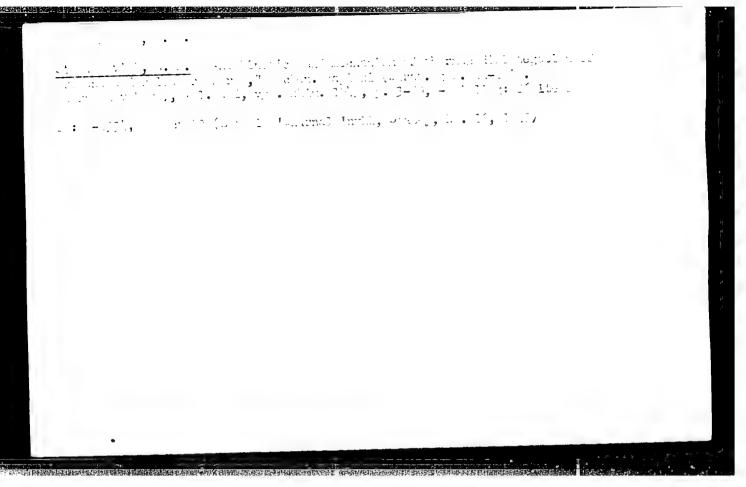
STEFOUKHO JTCH, A. D.

"Cinetique et mecanisme de la destruction des hydrocarbues. VI. Cinetique de la destruction de l'ethane sous pression reduite." A. N. Dintzes, D. A. Kwjatkowskij, A. D. Stepoukhowitch, A. W. Frost. (p. 1754)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii). 1937, Volume 7, No. 12.



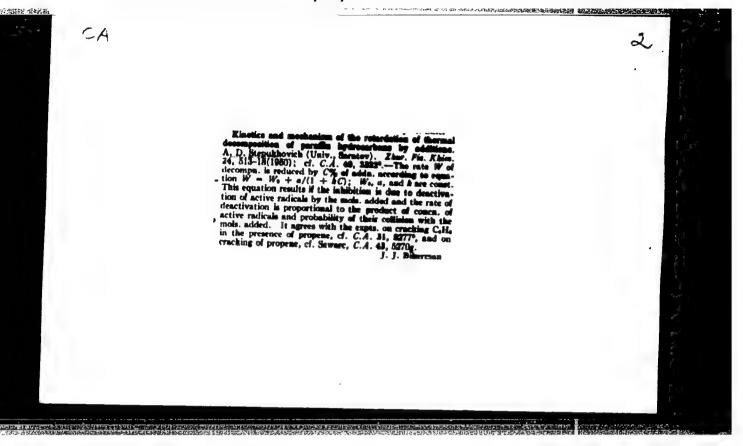




30

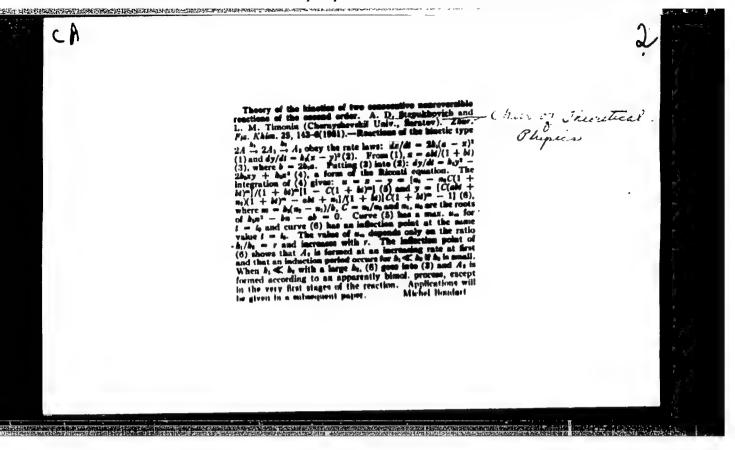
Inhibition of the vulcanization of rubber. II. A. D. Stepukhovich (Saratov Phys. Research Inst.). Zhar. Prihlad. Khim. I). Applied Chem.) 23, 605–10(1949); cf. C.A. 42, 404/—Analysis of the data of van Rossem shows a 1st-order rate law for combination of S, with $h \sim 8 \times 10^{-8}$ mm. 1, to hold up to about 8% of the combined S, $(\sim 20^{-8} \text{ hrs.})$. A similar evaluation of the data of Weber (Kollond, Z. 1, 34, 55; 1909) on the rate of combination of S an a natural rubber-S mixt. (100; 10) at 120° shows a sharp fall or the 1st-order k from 2.45 × 10.9 (min. 1) at 7.1% S bound to 0.85 × 10.9 at 22.5%. S (30) min.); at 135° k reaches a min., $\sim 2.9 \times 10^{-9}$ min. 15, at about 30% S bound (~ 150) min.), then rises slowly because of an exothermal process. Normally, the 1st-order rate const. for the vulcanization of rubber decreases with the progress of the reaction, i.e., the reaction is self-inhibited. Accordingly, its rate is in good agreement with the equation of Dintzes and Frost (C.A. 28, 2598!)) $dx/dt \approx k(1-x)/(1+\beta(1-x))$; the data of Weber at 120° give, with x=1, 10!k=1.0,

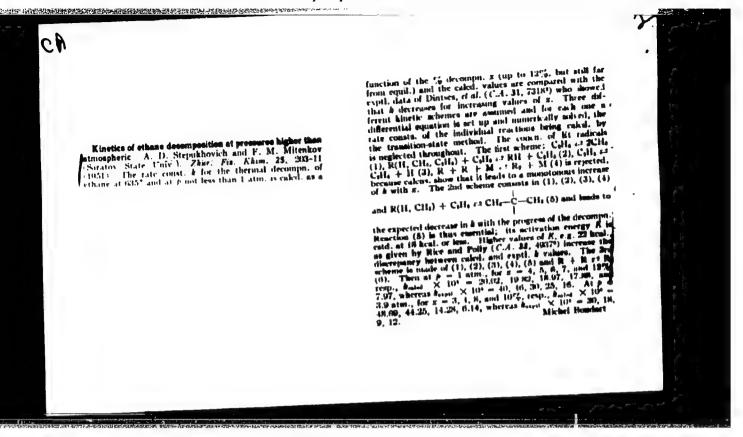
satisfactorily const. up to the combination of 22.5% S (300 min.) (evaluated from the integrated equation (1.4) $\ln[1/(1-x)] = h - h(x/t)$, by plotting (1.4) $\ln[1/(1-x)]$ against x/t). This cannot be explained by the proximity to equil., which lies far off. It is a case of rapture of chains by certain products. While the nature of the inhibiting products is unknown, the fact that vulcanization is initiated by oxidizate suggests that easily oxidizable substances ought to be inhibiting effects of ablehydes. At 150°, with the initial mixt. (neutral rubber: S = 100 - 10) the 1st-order k after 29, 30, 00 min. (32.36, 42.98, 51.64°; of the initial S combined) is, resp. $10^{10} = 1.95$, 1.87, 1.57, 1.51 min. "2; with 1.7%; BzH added, 1.64, 1.58, 1.53, 2.89, 3.7.73, 4.5.74?; S); with 1.7%; furfural, 1.71, 1.78, 1.52, 2.89, 3.7.73, 4.5.16%, with 1.7%; furfural, 1.71, 1.77, 1.57, 1.57, 1.59, 1.76, 1.69, 31.51, 41.06, 49.13%); the inhibitory power of the allehydes follows approx the order of their oxidizability. The known inhibiting action of sugars parallely that of the allehydes. Possibly, the inhibition involves combination of 11/5 or of active S atoms.



"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0





STEPUKHOVICH, A.D.

##TT.322 /Steric factors in unimolecular and bimolecular reactions Stericheskie faktory v monomolekuliarnykh i bimolekuliarnykh reaktsiiakh.

Zhurnal Fizicheskoi Khimii, 26(2): 145-155, 1952.

STREUKHOVICH A.D.; FIREL, A.G.

Kinetics of the decomposition of ethane in the presence of propylene at low pressures. Zhur. Fiz. Khim. 26, 21413-18 152. (MLRA 5:12) (GA 47 no.13.6229 153)

1. Saratovskiy gosudarstvennyy universitet.

Studied the kinetics of the decompn of ethane when propylene is added at two different temps, and pressures of ethane. Demonstrated that the velocity of the decompn of ethane is slowed down in accordance with A. D. Stepukhovich's eq. when propylene is added. With increasing temp, the retarding effect of propylene is reduced.

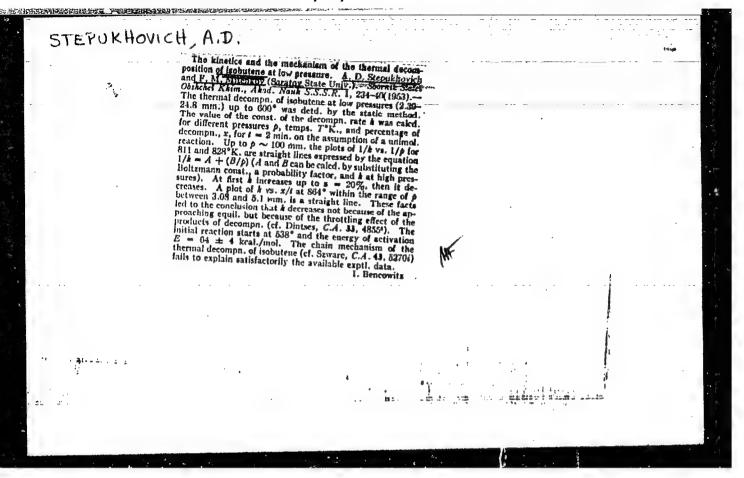
STEFULHOVICH, A.D.

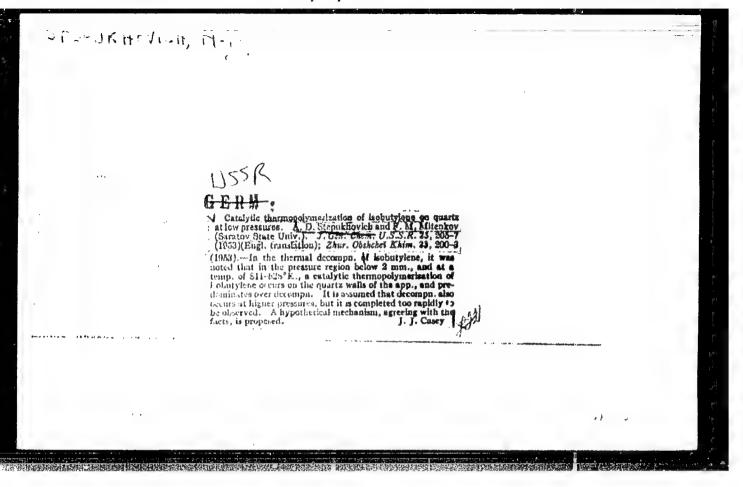
STEPUKHOVICH. A.D.; FINKEL, A.G.

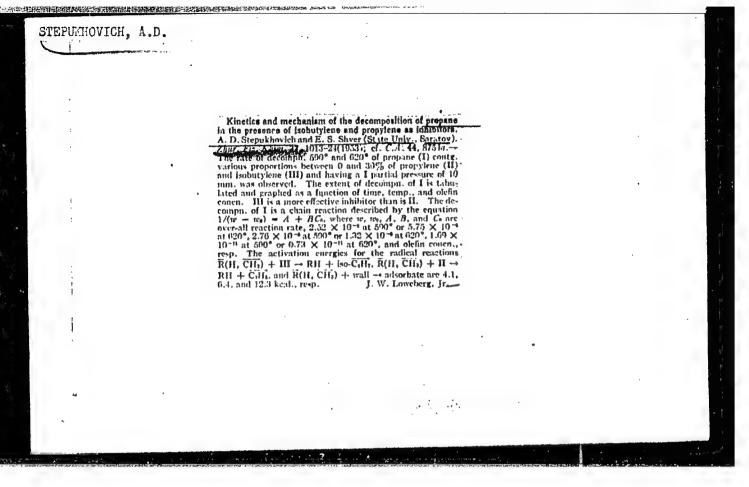
Kinetics and mechanism of the decomposition of ethane in the presence of propylene. Zhur. Fiz. Khim. 26, 1419-24 152. (MLRA 5:12) (CA 47 no.13:6230 153)

1. Saratovskiy gosudarstvennyy universitet.

Considers the mechanism for the decompn of ethane in the presence of propylene where the reactions of the active radicals combining with propylene to form inactive radicals play a principal part. An equation for the relationship betw3en the velocity of the reaction and the concentration of the inhibitor can be derived from the assumed scheme. Gives an explanation for the decrease in the inhibiting action of propylene as the temp is increased. The relative effect of the inhibiting action of the additive depends on the initial conc. of the hydrocarbons. At the temps and quantities of the inhibitor (propylene) in weestion the effect is inversely proportional to the initial conc of the hydrocarbon.







USSR/Chemistry - Cracking; Gaseous Hydrocarbons

Dec 53

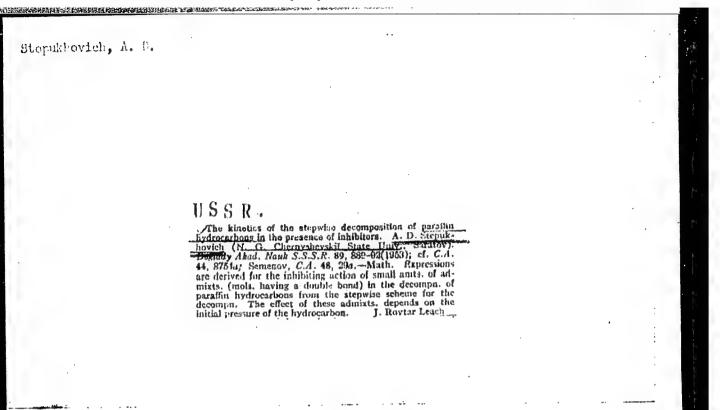
"Kinetics and Mechanism of the Decomposition of Hydrocarbons. Comm 3. Kinetics and Mechanism of the Decomposition of Butane (I) at Low Pressures in the Presence of Isobutene (II) or Propene (III) Acting as Retardants," A. D. Stepukhovich, A. M. Chaykin, Saratov State U im N. G. Chernyshevskiy

Zhur Fiz Khim, Vol 27, No 12, pp 1737-47

At pressures of 1-30 mm and temps of 5480 and 5730, decompn of I is a self-inhibiting reaction. The kinetics of the decompn of I in the presence of II

275T9

or III were investigated in detail and the decompn shown to be a chain reaction. The retardant effect of II was found to be greater than that of III. II and III break the reaction chain by transforming the active radical into an inactive one. The consts of individual reactions and of the wall effect in stopping reaction chains were detd. The chain lengths were calcd and the concns of CH₃ radicals estd.



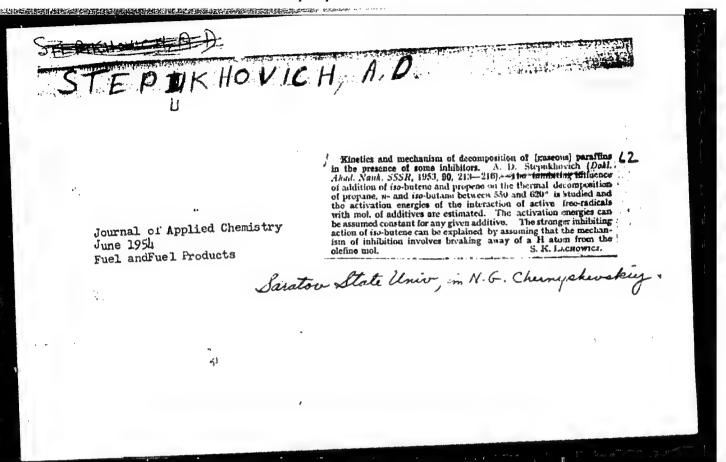
USSR/Chemistry - Reaction Kinetics; Cracking and Combustion

21 Apr 53

"Kinetics and Decomposition Mechanism of Propane in the Presence of Added Organic Molecules,"
A. D. Stepukhovich and E. S. Shver, Saratov State U.

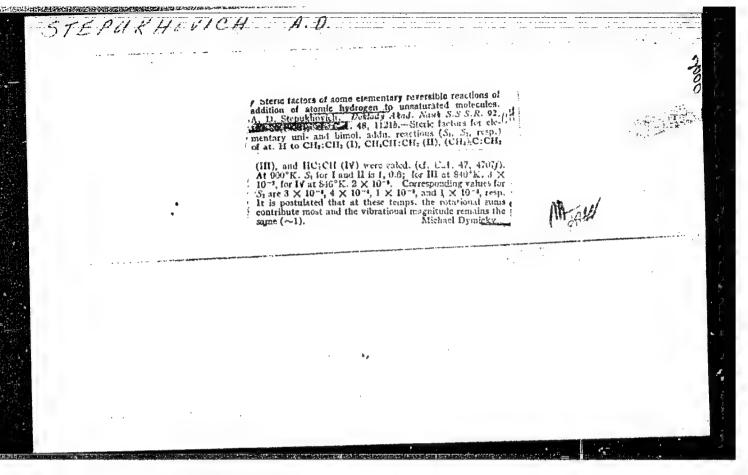
DAN SSSR, Vol 89, No 6, pp 1067-1070

Studied the action of addns of isobutylene and propylene on the thermal decompn of propane at 620° and 10 mm pressure of propane. Isobutylene inhibits the thermal decompn of propane twice as much as propylene. Presented by Acad N. N. Semenov, 2h Feb 53.



"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0



STEPUKHOVICH, A. D.

USSR/Chemistry - Hydrocarbons, Reaction Kinetics 11 Sep 53

"Kinetics of the Chain Decomposition of Paraffin Hydrocarbons," A. D. Stepukhovich

DAN SSSR, Vol 92, No 2, pp 373-376

Attempts to give a more up-to-date theory on the kinetics of the chain decompn of paraffin hydrocarbons on the basis of new exptl facts. Derived a differential equation for the chain decompn of paraffin hydrocarbons and applied it to ethane. Presented by Acad N. N. Semenov 21 Jul 53.

269T22

STepuKhovich, A.D.

USSR/Chemistry - Hydrocarbon decomposition

Card 1/1 Pub. 147 - 2/27

Authors : Stepukhovich, A.D., and Derevenskikh, L.V.

Title : The kinetics and mechanism of hydrocarbon decomposition. Part 2. The

kinetics and mechanism of ethane decomposition at low pressures.

Periodical : Zhur. fiz. khim. 28/2, 199-203, Feb 1954

Abstract: The effect of isobutylene additions on the decomposition of ethane at low pressures was investigated. The quartz walls of the reactor contaminated with isobutylene decomposition products were found to have accelerated the rate of ethane decomposition. The isobutylene in itself inhibits the catalyzed and non-catalyzed ethane decomposition and saturation takes effect on the isobutylene. The kinetics of ethane decomposition was established at 635°C in the presence of isobutylene and the catalytic effect of the contaminated reactor walls was determined. The possible mechanism of inhibition reaction with isobutylene, consisting in substituting the active radicals with less active ones, which leads to the contraction of the chain, was

evaluated. Nine references: 7-USSR; 1-USA and 1-English (1935-1953). Tables;

graphs.

Institution: The N. G. Chernishevskiy State University, Saratov

Submitted : January 1, 1953

USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry. Catalysis

: Referat Zhur - Khimiya, No 4, 1957, 11216 Abs Jour

: III. A.D. Stepukhovich and G.I. Kats Author

IV. A.D. Stepukhovich and G.P. Vorob'yeva V. A.D. Stepokhovich and L.V. Derevenskikh

VI. Stepukhovich A.D., Stal'makhova L.S., Yeremin V.V.

VII. Stepukhovich A.D., Derevenskikh L.V.

: Kinetics and Mechanism of Decomposition of Hydrocarbons. Title

III. Kinetics and Mechanism of Thermal Decomposition of Divinyl at Low Temperatures.

IV. Kinetics and Mechanism of Decomposition of Isobutane in the Presence of Isobutylene and Propylene as Inhibitors

V. Kinetics of Thermal Decomposition of Gaseous Paraffins in the Presence of Added Divinyl

VI. Kinetics of Thermal Decomposition of Gaseous Paraffins in the Presence of Acetylene

VII. Kinetics and Mechanism of Decomposition of Gaseous Alkanes in the Presence of Allene

Zhurnal fiz. khimii, 1954, 28, No 7, 1174-1185; No 8, 1361-1370; No 10, Orig Pub 1720-1724; No 11, 1878-1881; 1955, 29, No 12, 2129-2132

1/4

USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry. Catalysis

是可能的类似的复数形式,我们就是我们的现在,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们就是一个人的,我们也是一个人的。

B-9

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11216

Abstract : III. The velocity constant of divinyl decomposition, calculated in accordance with the equation of the reactions of second order, varies linearly, at 570-620° and 2-30 mm Hg pressure, depending on 1/po (po-- initial pressure). Calculated were mean duration of life of divinyl molecule in activated state, 5.10 seconds, the number of kinetically active degrees of freedom 20, and dissociaton energy of divinyl E = 79.4 ± 1.9 kcal/mole. Decomposition of divinyl conforms to the Dintsess-Frost equation and is interpreted as a chain reaction undergoing spontaneous inhibition by decomposition products. Additions of divinyl accelerate decomposition of Colla at 620°. Accelerative action of divinyl reaches a limit at 12%.

> IV. By the method of inhibiting additives (RZhKhim, 1953, 8215) a study was made of thermal decomposition of isobutane at pressure of 10 mm Hg and temperatures of 548 and 573°. Addition of 0.5% slows down the decomposition sharply, on increase of the addition from 1 to 7% effectiveness of its action decreases, and with 7-10% saturation is reached (first order velocity constant acquires constant value). Under the same conditions inhibition by isobutylene is more effective than by propylene.

2/4

USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry. Catalysis

B-9

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11216

Experimental data on inhibiting action of additives fit the equation: $1/W - W_0^* A + BC$ (1), wherein W -- reaction velocity, W_0 -- residual velocity, A and B -- constants, C(add) -- -- concentration of additive, which proves the chain nature of the decomposition. The primary effect is decomposition of isobutane molecule at C-C bond. Inhibiting action of olefins is explained by removal of H atom by active radical from molecule of additive with formation of inactive unsaturated radicals. By means of equation (1) were calculated velocity constants of the reaction of chain termination at the wall and at molecules of additive. Activation energy of inhibiting reactions brought about by isobutylene and propylene is, respectively, 5.6 and 8.5 kcal/mole, that of the reaction of termination at wall, 14.7 kcal/mole.

V. Study of kinetics of thermal decomposition of propane, butane and isobutane, in the presence of divinyl, with initial pressure of decomposing hydrocarbons ~ 10 mm Hg, and at temperatures of 510-593°. Additions of divinyl, which is a product of cracking of hydrocarbons, do not inhibit decomposition of these hydrocarbons. Absence of inhibiting

3/4

USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry. B-9 Catalysis

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11216

action of divinyl is correlated with greater durability of C-H bond, in CHo groups, at the double bond carbon, in comparison with durability of C-H bond in methyl groups of propylene of isobutylene.

VI. Study of kinetics of thermal decomposition of propane and butanes in the presence of 1-20% C_2H_2 at pressure of decomposing hydrocarbons 10 mm and temperatures of 500-600°. Additions of C_2H_2 do not inhibit rate of decomposition. Increased values of decomposition velocity constant of propane at pressures below 10 mm, in the presence of C2H2, are due to the fact that that C2H2 impedes diffusion of active centers to the walls. Thermal calculations have shown the possibility of a reaction between atomic hydrogen and C2H2, with formation of highly reactive vinyl radical which is stable under cracking conditions.

VII. Additions of allene inhibit cracking of C3H8 and iso-C4H10, but do not affect decomposition of C4H10. Mechanism of inhibition resides in adddition of H atoms to allene molecule with formation of little active allyl radicals. Absence of inhibition in the case of $C_4\mathrm{H}_{10}$ is due to the fact that increase of latter occurs essentially with formation of CH_{π} radical.

Communication II, see RZhKhim, 1957, 393.

USSR/ Chemistry

J. T. HOVICH, I.

Kinetics theory

Card

: 1/1

Authors

: Stepukhovich, A. D., and Bakhareva, I. F.

Title

* The kinetics theory of two successive one-sided reaction of different

Periodical

: Chur. fiz. khim. 28, Ed. 6, 970 - 975, June 1954

Abstract

1 An accurate solution to the kinetic problem of two one-sided successive reactions of different order was obtained through integration of differential equations applicable to the rate of such reactions. established that two successive reactions of different order, at a certain constant ratio, can take place either in accordance with the bior mono-molecular law. Final terms for the calculation of changes, occurring during the concentration of basic substances, intermediate and final products, are presented. Four USSR references. Graph.

Institution : The N. G. Chernishevskiy Etate University, Saratov

Submitted

: November 22, 1953

STepukhovich, A.D.

USSR/Chemistry - Physical chemistry

Card 1/1: Pub. 1/7 - 3/22

Authors : Stepukhovich, A. D.

Title : Problem concerning the A. V. Frost and A. I. Dintses kinetic equation

Periodical: Zhur. fiz. khim. 28/11, 1882-1888, November 1954

Abstract : The universality of the A. V. Frost and A. I. Dintses empirical equation in its application to kinetics of thermal decomposition of paraffins, certain diene hydrocarbons and during rubber vulcanization processes, is discussed. The equation is based on a radical-chain system of decomposition in which the wall of the vessel acts not only as a chain separation factor but also as a chain initiator. The Frost-Dintses equation was found to be best applicable to instances of heterogeneous reactions. Theoretical

terms for the calculation of the inhibition coefficient and constants of the Frost-Dintses equation are presented. Fifteen references: 14-USSR

and 1-USA (1928-1954).

Institution: The N. G. Chernishevskiy State University, Saratov

Submitted : September 14, 1953

USSR/Chemistry - Physical chemistry

Card 1/2

Pub. 147 - 2/27

Authors

Title

Stepukhovich, A. D.

The state of the s About the equilibrium during reactions participated by radicals

Periodical

Zhur. fiz. khim. 28/12, 2088-2094, Dec 1954

Abstract

The equilibrium constants of a reversible decomposition reaction of an ethyl radical into ethylene and atomic hydrogen was calculated and the calculation results were compared by various methods. It is shown that the approximated thermodynamic method of calculating equilibrium constants of the reversible decomposition reaction leads to a highly reduced value. The chemical constants of C_2H_4 and C_2H_5 were computed by means of statistical methods. It is shown that the equilibrium in the $C_2H_5 \Longrightarrow C_2H_4$ + H reaction is displaced toward C_2H_5 and that the latter should be taken into consideration during the cracking of ethane and other hydrocarbons with the aid of stable radicals. The perspective

Zhur. fiz. khim. 28/12, 2088-2094, Dec 1954

(Additional Card)

Card 2/2

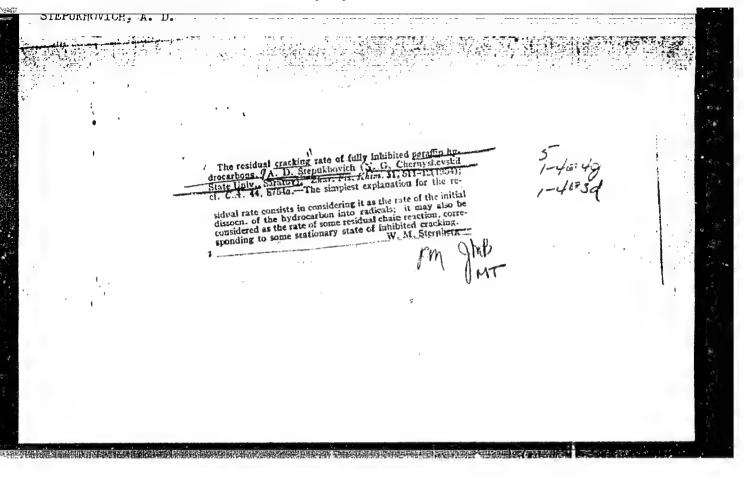
Abstract

: of utilizing the Nernst heat theorem for the calculation of equilibriums in radical reactions is discussed. Fourteen references; 12 USSR;

1 USA and 1 English (1932-1954). Tables.

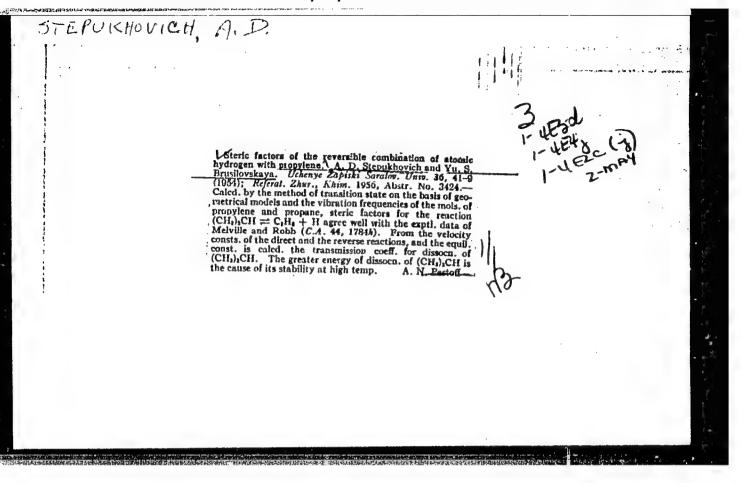
Institution: State University, Saratov

Submitted : September 23, 1953



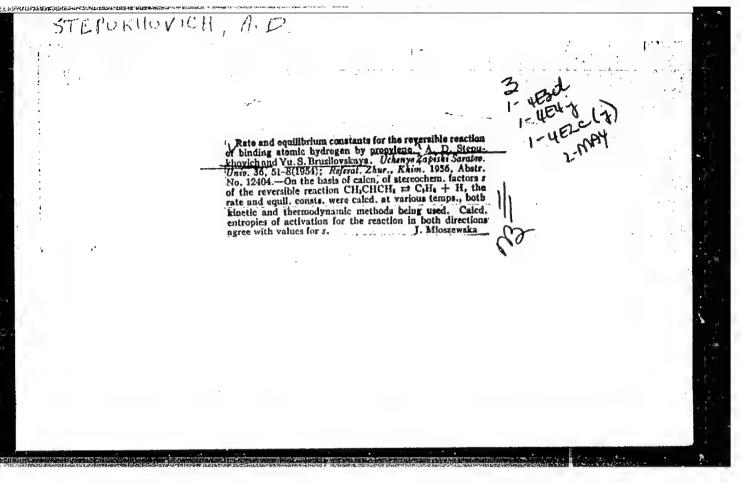
"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0



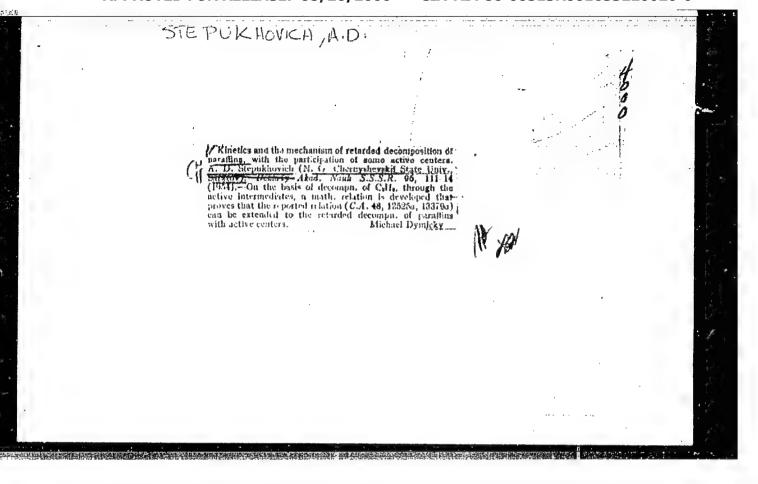
"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0



"APPROVED FOR RELEASE: 08/26/2000 CI

CIA-RDP86-00513R001653220020-0



USSR/ Chemistry - Physical chemistry

Card 1/1

Pub. 22 - 39/56

Authors

Stepukhovich, A. D., and Etingof, E. I.

Title

Steric factors of elementary reversible reactions of H-, and $\mathrm{CH_{3}-radicals}$ with simple olefines

Periodical : Dok. AN SSSR 99/5, 815-818, Dec 11, 1954

Abstract

The results obtained by calculating the steric factors of reversible elementary reactions of H-, and CH2-radicals, with elefine type melecules, are presented. It was established that the steric factors involved in the reactions of the hydrogen atom separation from the olefine molecules by reans of the H-radical have one and the same order of magnitude. The storic factors of reversible reactions between vinyl-, allyl- and isobetesylradicals and a methano molecule have an order of magnitude approximation equal to the steric factor of direct reactions. The Massatter the direct difference, in the steric factors in analogous reactions when the redicals, is emploised. Eight references: 6-USSR; 1-800 / 1000-1000 (1000-1000). Tobbe.

All and Control State University, Secretary Constant Control of Co

USSR/Chemistry - Hydrocarbon cracking

Card 1/1

Pub. 22. - 43/63

Authora

Title

Stepukhovich, A.D., and Tatarintsev, V.V.

: Cracking of paraffin hydrocarbons initiated by azomethane additions

Periodical : Dok. AN SSSR 99/6, 1049-1052, Dec 21, 1954

Abstract

It is shown that the hydrocarbon cracking reaction can be initiated by small additions of certain substances even in conditions where cracking reactions are almost impossible, e.g., at very-low temperatures. At such conditions (low temperature) the substance serving as initiators when introduced into the reactor begin decomposing forming radicals which in turn result in a chain decomposition of the hydrocarbons subjected to cracking. The initiation produced by the radicals introduced into the reaction zone, is explained on the basis of the chain theory which appears to be the best proof of the chain process. The initiating effect of azomethane depends upon the percentage-content of azomethane in the mixture. The difference in the initiating effect of azomethane in the case of propane and isobutane is explained by the difference in the steric factors. Twelve references; 6-USA and 6-USSR (1927-1953) Graphs.

Institution: The M.G. Chernishevskiy State University, Saratov

Presented by: Academician V.N. Kondratyev, June 25, 1954

STEPUKHOUTCH, A.D

USSR/ Chemistry - Physical chemistry

Card 1/1

Pub. 147 - 5/22

Authors

s Stepukhovich, A. D., and Etingof, Ye. I.

Title

Steric factors of elementary reversible reactions of H- and CH -radicals with simple olefines

Periodical

l Zhur. fiz. khim. 29/11, 1974-1983, Nov 1955

Abstract

Experiments showed that the steric factors in reactions leading to displacement of H-atoms by olefine molecules and resulting in the formation of complex unsaturated radicals have a value of 10⁻³. The steric reaction factors of complex radicals having a double bond with the hydrogen molecule were found to have a value much lower than the steric factors of reversible reactions. Reactions of complex radicals with simple molecules showed much lower values of the steric factors than reactions of simple radicals with complex molecules. Fifteen references: 13 USSR and 2 USA (1948-1955).

(a-1)

Institution: Saratov State University im. N. G. Chernyshevskiy

Submitted

: October 23, 1954

Trian naturnatura province reservator a naturalismental accompania

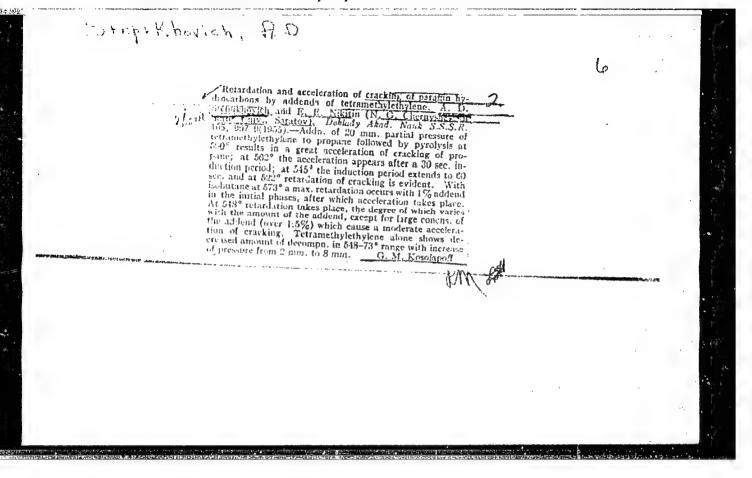
STEPUKHOVICH, A.D.: DEREVENSKIKH, L.V.

Kinetics and mechanism of hydrocarbon decomposition. Part 7.
Kinetics and mechanism of the decomposition of gaseous alkanes in presence of allene. Zhur.fiz.khim. 29 no.12:2129-2132 D '55.

MLRA 9:

1. Saratovskiy gosudarstvennyy universitet imeni N.G. Chernyshev-skogo.

(Paraffins)



 Stepukhovich; H.D.

USPENHI KHIMII

Progress in Chemistry

Vol 25, Nr 3, March, 1956, pp 257-392

STEPUKHOVICH, A. D.;

Cherry

Steric Factors of Radical Reactions in Chemical Kinetics

Chemical-kinetic theory is examined and equations for calculating steric factors for various types of radical reactions are deduced. Values for several forward and reverse reactions are tabulated.

B-9

USSR/Fhysical Chemistry - Kinetics. Combustion.

Explosives. Topochemistry. Catalysis.

: Referat Zhur - Khimiya, No 2, 1957, 3778 Abs Jour

: Stepukhovich A.D. Author

11.11.11 H

: Kinetics and Mechanism of Initiation of Gracking of Title

Paraffin Hydrocarbons

: Zh. fiz. khimii, 1956, 30, No 3, 556-565 Orig Fub

: A mechanism is proposed, of the initiated cracking (C) Abstract

of hydrocarbons, which is based upon the concept that the initiator (I) not only accelerates but also slows down C. Reactions of isomerization of certain radicals are of significance in the propagation of chains. A kinetic equation is derived for the rate of C, and integration of the equation is effected, taking into account change in concentration of I. At low concentra-

tions of I the rate of C increases linearly with increa-

se in relative concentration of I. At higher

Card 1/2

- 115 -

51-001-11-6

Category USSR

B 9

Zh -Kh, No 3, 1957, 7520 Abs Jour

Author

Stepukhovich, A. D. and Kaplan, Ye. G.

Inst

Title

Kinetics and Mechanism of the Decomposition of Hydrocarbons.

I Initiation of the Cracking of Ethane by the Addition of Azo-

methane

Orig Pub

Zh. Fiz Khimii, 1956, Vol 30, No 4, 928-933

Abstract

It has been shown that azomethane (I) initiates the cracking of ethane at 3680; the extent of cracking, however, is less than that observed with other hydrocarbons. The initiating effect of I depends on the rate of its decomposition. Increasing the concentration of I decreases its effectiveness. A mechanism for the initiation step of the reaction is given based on the double

Card

1/2

-6-

Category USSF

B 9

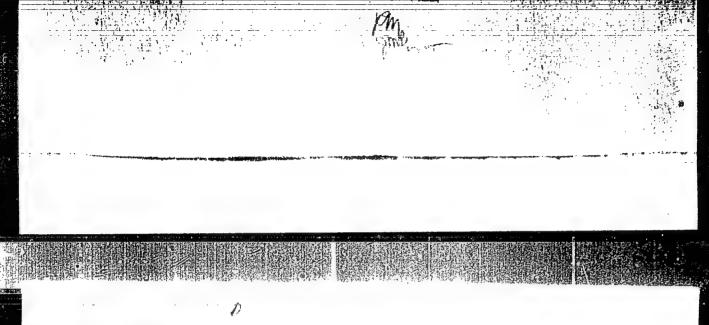
Abs Jour. Zh-Kh, No 3, 1957, 7520

role of I (RZhKhim, 1957, 3778). The smaller effect of I on the cracking of C_2H_6 is due to the slow rate of the reaction CH_3 C_2H_6 C_2H_6 as well as to the fact that the equilibrium C_2H_5 C_2H_4 C_2H_4 H is shifted to the left at low temperatures. A kinetic equation for the cracking is given.

Card

2/2

-7-



Category. USSR / Physical Chemistry - Minetics. Combustion.

Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29986

Author : Stepukhovich A. D., Bakhareva I. F.

Inst : not given

Title : Reply to the Comments of Yu. S. Sayasov

Orig Pub: Zh. fiz. khimii, 1956, 30, No 6, 1407-1409

Abs ARPROMED; FOR RELIEAS 5; e98/426/2000 cricIA-RDR86, 90512, 901653220020-0" the paper by the authors (RZhKhim, 1955, 23283).

Card : 1/1

-3-

Category: USSR / Physical Chemistry - Kinetics. Combustion.

Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29993

Author : Stepukhovich A. D., Krol' I. K.

Inst : not given

Title : Kinetics and Mechanism of Decomposition of Hydrocarbons. VIII.

Effect of Additions of Butylenes on Kinetics of Cracking of

Gaseous Alkanes.

Orig Pub: Zb. fiz. khimii, 1956, 30, No 8, 1718-1726

Abstract: Additions of a mixture of butenes and 1-butene, at 612 and 635° and a pressure of 20 mm Hg, inhibit cracking (C) of C₂H₆. Slowing down at 635° is observed after 1.5 minute following beginning of the reaction and increases thereafter. On lowering of the tempe-

rature of C (612°) inhibition becomes manifest during later stages of the reaction. Inhibition is caused by the product of decomposition of butenes, namely by propylene. Experimental data on C of C₂H_L, in the presence of added butenes, satisfy the equa-

Card : 1/2 _4-

77年,宋朝廷建建,张廷建建建设的"中华的政治社会"的经济中国的中华的政治中心,但中华国际的政治、"国际政治、"大学"中华的共产、"国际政治、政治、政治、政治、"国际",

Category: USSR / Physical Chemistry - Kinetics. Combustion.

Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29993

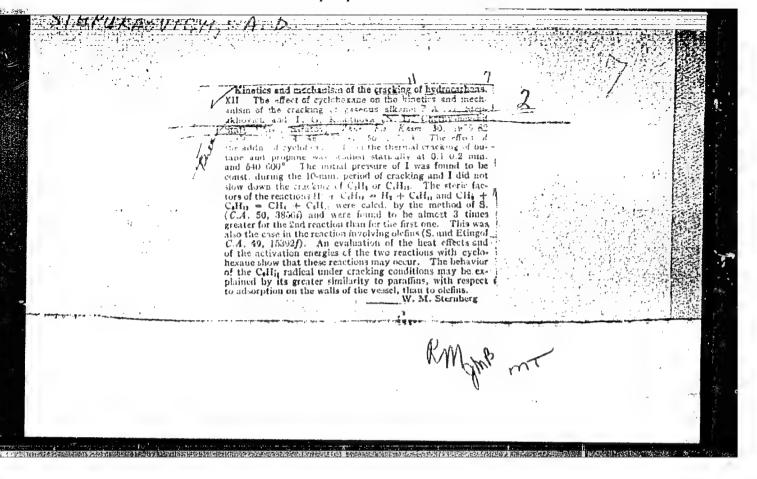
tion of an inhibited C (RZbKhim, 1953, 8215). Additions of butenes do not inhibit the C of C_3H_5 at 590-620° and C of butanes at 548-574°, and even accelerate the C of C_2H_5 , somewhat, due to decomposition of butenes. On C of C_3H_5 and butanes the auto-inhibition by decomposition products $(C_3H_5$ and iso- C_2H_7) overlaps the slowing down effect of additions. Decomposition of 1-butene was also studied. Part VII, see RZhKhim, 1957, 11216.

Card : 2/2

-5-

"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653220020-0



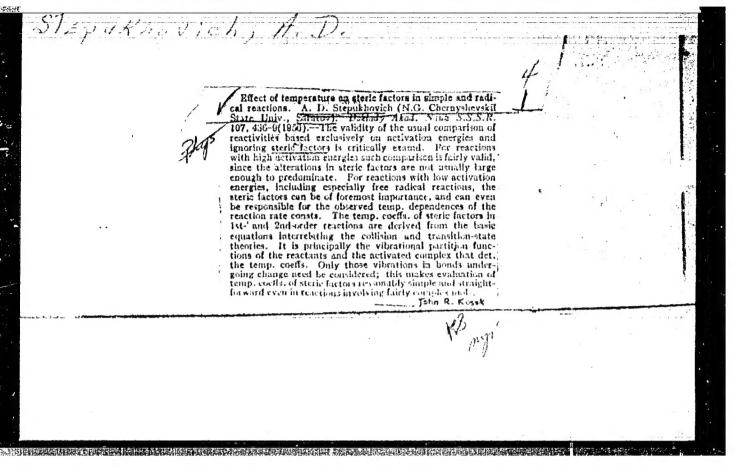
STEPURHOVICH, A.D.

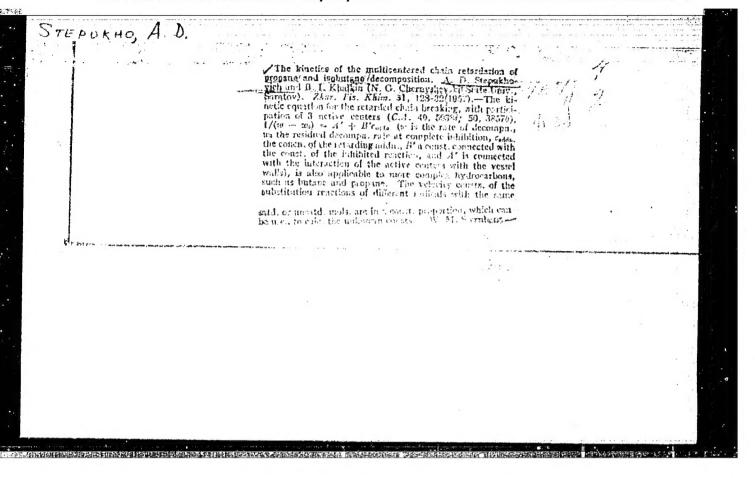
Equilibrium in addition and substitution reactions of H and CH₃ radicals with unsaturated and saturated hydrocarbons. Zhur. fiz. khim. 30 no.11:2387-2398 M *56. (MLRA 10:4)

THE PARTY OF THE PROPERTY OF THE PROPERTY OF THE PARTY OF

1. Saratovskiy gosudarstvennyy universitet im. N.G. Chernyshev-skogo.
(Hydrocarbons) (Chemical reaction--Mechanism)
(Substitution (Chemistry))

APPROVED FOR RELEASE: 08/26/2000 CIA-RDP86-00513R001653220020-0"





STEPURHOVICH, A.D.

USSR/Chemical Technology - Chemical Products and Their

-8

Application. Treatment of Natural Gases and Petroleum.

Motor and Jet Fuels. Lubricants.

Ans Jour

: Ref Zhur - Khimiya, No 1, 1958, 2548

Author

Title

: Stepunhovich, A.D.

Inst

Concerning the Nature of Residual Velocity of Fully Decele-

rated Cracking of Paraffin Hydrocarbons.

Orig Pub

: Zh. fiz. khimii, 1957, 31, No 2, 511-512

Abstract

: Residual velocity of cracking of paraffin hydrocarbons decelerated by additives, is considered as the velocity of a certain residual chain reaction, corresponding to a certain steady state of decelerated cracking. It is noted that the reaction of disproportionation between allyl radicals and molecules of olefins can be of significance also in the case of cracking of paraffins. In this case the residual velocity is also the velocity of a steady state

Card 1/2